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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/608,703      | 06/27/2003  | Jihad J. Khoury      | 02-665              | 9675             |

7590 08/13/2004

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EXAMINER

BINDA, GREGORY JOHN

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3679

DATE MAILED: 08/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/608,703

Applicant(s)

KHOURY, JIHAD J.

Examiner

Greg Binda

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-17, drawn to a pump, classified in class 416, subclass 244R.
  - II. Claims 18 & 19, drawn to a method of reducing stress within a rotational coupling, classified in class 29, subclass 428.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product could be made without distributing the driving force and instead by concentrating the driving force at a point-to-point connection between the rotating shaft and driven member.

3. Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Michael McNeil on August 5, 2004 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-17.

Affirmation of this election must be made by applicant in replying to this Office action. Claims

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18 & 19 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### *Drawings*

5. The drawings are objected to because Fig. 1 shows the pin 18 and shoes 52 & 53 as a one piece element which contradicts the three piece assembly described in the description (see page 12). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

*Specification*

6. The disclosure is objected to because:
  - a. Page 5, line 19, "cam ring 15" should be changed to "cam ring 57".
  - b. Page 10, line 8, "second planar contact surface 46" should be changed to "second contact surface 46".
  - c. Page 10, line 9, "second contact area 56" should be changed to "second planar contact area 56".
  - d. Page 14, line 8, "pin 28" should be changed to "pin 18".
7. The specification is objected to as failing to comply with 37 CFR 1.71 and 1.75(d)(1) because the detailed description fails to provide proper antecedent basis for the limitations in claim 16, lines 3 & 4. See MPEP §§ 2163.06III and 2163.07
8. The abstract of the disclosure is objected to because it begins with a phrase that can be implied. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. **It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.**

*Claim Objections*

9. Claims 1, 9 are objected to because:
- a. Claim 1 recites the limitation "the rotor" in line 5. There is insufficient antecedent basis for this limitation in the claim.
  - b. Claim 9, line 2 includes "a the".

*Claim Rejections - 35 USC § 112*

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 5 & 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. Claim 5, line last recites the limitation, "the bore". It is not clear which of the previously recited bores is "the bore". See claim 2, line 2 and claim 5, line 2.
- b. Claim 10, line 5 recites the limitation "the pin [18] being cylindrical and at least partially received in the bore". It is not clear which of the previously recited bores is "the bore" (see line 4) or if "the bore" is the pin bore recited in line 7.

*Claim Rejections - 35 USC § 102*

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1, 2, 4, 7-9, 11 & 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Cline, US 210,298. Fig. 1 shows a pump comprising a pump casing **A** and a rotational coupling. Figs. 1-3 show the rotational coupling comprising: a driven member/rotor **F** including an inner surface that defines an opening and includes contact surfaces **a**; a rotating shaft **D** received in the opening of the driven member; a coupling/pin **G** being operable to couple the rotor **F** to the rotating shaft, and including drive surfaces of shoes **b** connected to, but separated a radial distance from the rotating shaft; and the drive surfaces and contact surfaces being in contact over a planar contact area.

14. Claims 1, 2, 4-9, 11 & 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Tang, US 6,311,943. Figs. 2 & 3 show a pump comprising a pump casing 40 and a rotational coupling. Figs. 2 & 3 show the rotational coupling comprising: a driven member/rotor 43 including an inner surface that defines an opening 44 and includes contact surfaces 46; a rotating shaft 20 received in the opening of the driven member; a cylindrical pin 36 being operable to couple the rotor to the rotating shaft, and including drive surfaces 34 of shoes 32 connected to, but separated a radial distance from the rotating shaft; and the drive surfaces and contact surfaces being in contact over a planar contact area. The shoes 32 have a rectangular cross section.

15. Claims 1, 3, 6, 8, 9 & 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsumoto, US 6,196,802. Fig. 1 shows a pump comprising a pump casing 1 and a rotational

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coupling. Figs. 2-5 show the rotational coupling comprising: a driven member/rotor 10-17 including an inner surface that defines an opening and includes contact surfaces; a rotating shaft 8 received in the opening of the driven member; a coupling 30 being operable to couple the rotor to the rotating shaft, and including drive surfaces of shoes 33 connected to, but separated a radial distance from the rotating shaft; and the drive surfaces and contact surfaces being in contact over a planar contact area. In col. 1, lines 48-55, the driven member including the contact surfaces is disclosed as being made of a relatively weak material (see “synthetic resin”) and the coupling 30 including the driving surface is disclosed as being comprised of a relatively strong material (see “metal”).

16. Claims 1, 2, 4, 5 & 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Benson, US 4,135,372. Fig. 1 & 2 show a rotational; coupling comprising a rotor 40 including an inner surface that defines an opening (between arms 56 & 58) an includes contact surfaces (inner surfaces of arms 56 & 58); a rotating shaft 12 received in the opening of the rotor 40; and a coupling between the shaft 12 and the member 40. Figs. 1 & 2 show the coupling comprises a cylindrical pin 36 & 38 at least partially received in a pin bore; two rectangular shoes 20 & 22 with planar drive surfaces that contact the contact surfaces of the rotor 40, each shoe has a centerline defining a bore 32 & 34 for the pin.

*Claim Rejections - 35 USC § 103*

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:



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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 3 & 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cline. Cline shows all the limitations of the claim but does not expressly disclose the contact surface **a** comprised of a powdered metal and the drive surface **b** comprised of steel. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the contact surface **a** comprised of a powdered metal and the drive surface **b** comprised of steel, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

*In re Leshin*, 125 USPQ 416.

19. Claims 3, 10 & 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tang for the same reasons noted immediately above.

### *Conclusion*

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Smith, Tajima, Sekine, and Maki each show a rotational coupling. Koch shows an insert with a planar driving surface. Sherwood discloses metal powder.

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21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Binda whose telephone number is (703) 305-2869. The examiner can normally be reached on M-F 9:30 am to 7:00 pm with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (703) 308-2686. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Greg Binda  
Primary Examiner  
Art Unit 3679